

FOR OFFICIAL USE

Presenting Centre No.	Subject No.	Level	Paper No.	Group No.	Marker's No.
	0560				

C

# perfectpapers

Total Marks	KU	PS
	36	36

**[CS(SG)08C]**

NATIONAL  
QUALIFICATIONS

Time: 1 Hour 45 minutes

COMPUTING STUDIES  
STANDARD GRADE  
Credit Level

Estimate Examination Paper

Fill in these boxes and read what is printed below.

Full name of school or college

Town

First name and initials

Surname

Date of birth

Day Month Year

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Read each question carefully

Attempt **all** questions.

Write your answers in the space provided on the question paper.

Answer in sentences wherever possible.

Before leaving the examination room you must give this book to the invigilator. If you do not, you may lose all the marks for this paper.

1. A spreadsheet is used to display a league table. Part of it is shown below.

	A	B	C	D	E
1	Points for a win =		3		
2					
3	<b>Team</b>		<b>Wins</b>	<b>Loses</b>	<b>Points</b>
4	Rovers		2	2	6
5	Albion		3	1	9
6	United		2	2	6
7	City		1	3	3
8					

(a) What would be the formula in cell E4?

\_\_\_\_\_

(b) The formula in cell E4 is *replicated* into cells E5 to E7.

State whether **each** cell reference in the formula should be *absolute* or *relative*?

\_\_\_\_\_

\_\_\_\_\_

(c) Lois has to update the spreadsheet. She does not have good eyesight so she *customises* the HCI of the spreadsheet software to help her.

(i) What is meant by the term customise?

\_\_\_\_\_

\_\_\_\_\_

(ii) Describe **two** ways in which the HCI of the software could be customised so that it was easier for Lois to use.

1. \_\_\_\_\_

\_\_\_\_\_

2. \_\_\_\_\_

\_\_\_\_\_

(d) When the spreadsheet is updated, a copy of the league table is automatically updated on a website.

What type of linkage is being used? Give a reason for your answer.

\_\_\_\_\_

\_\_\_\_\_

KU	PS
	1 0
	2 1 0
	1 0
	2 1 0
	2 1 0

1. (e) The website is *multi-access*.  
cont

(i) What is meant by the term “multi-access”?

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(ii) Why is it necessary for a website to be multi-access?

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(f) It is possible to view the website on your mobile phone.

Name a wireless transmission medium used to allow mobile phones to access a network.

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KU	PS
2 1 0	
	1 0
1 0	

[Turn over

2. BananaSoft is a company that produces custom made software. They send the letter below to all of their clients to let them know about their new website. Part of the letter is shown below.

<p>BananaSoft Jobs House, Workton, WO67 6TF</p> <p style="color: blue; text-decoration: underline;"><a href="http://www.bananasoft.co.uk">www.bananasoft.co.uk</a></p>
<p>2 November 2007</p> <p>Dear</p> <p>As you can see from our letterhead, we now have a new website.</p> <p>The website contains information about our team of system analysts and programmers and some of the projects that have recently been completed.</p> <p>We hope that you find it useful.</p>

- (a) This letter will be sent to all of their clients. Each letter will be the same for each client apart from the clients personal details.

- (i) What is the name for this type of letter?

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- (ii) Describe the steps required to create the personalised letters.

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- (b) The graphic at the top of the letter is a black and white picture, 2 inches high and 3 inches across. It has a resolution of 450 dots per inch.

Calculate the storage requirements of the graphic, giving your answer using the most appropriate unit.

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KU	PS
1 0	
3 2 1 0	
	3 2 1 0

2. (c) BananaSoft produce software that is *portable* and is written using *high-level languages*.  
**cont**

(i) State a characteristic of portable software.

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(ii) Apart from being portable, state **two** characteristics of high level languages.

1. 

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2. 

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(iii) The programmers use both *interpreters* and *compilers* when writing the programs.

Explain why both would be used.

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KU	PS
1 0	
2 1 0	
	2 1 0

[Turn over

3. Simon has just bought a new computer system with an up-to-date operating system.

(a) Describe **two** tasks the operating system carries out.

1. \_\_\_\_\_  
\_\_\_\_\_  
2. \_\_\_\_\_  
\_\_\_\_\_

(b) Simon made sure his computer had a *sound card*.

Explain why a sound card is necessary.

\_\_\_\_\_  
\_\_\_\_\_

(c) Simon requires word processing software but he cannot afford to buy software. His friend suggests downloading *freeware* or *shareware* software.

(i) Should Simon get shareware or freeware?

Give a reason for your answer.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(ii) Simon uses a *search engine* to help find him find what he is looking for.

What is a search engine?

\_\_\_\_\_  
\_\_\_\_\_

(iii) Describe how Simon should use the search engine to help him access the software he is looking for.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

KU	PS
2	1
1	0
0	0
1	0
0	0
0	2
0	1
0	0
0	2
0	1
0	0

3. (d) Simon finds a website that uses an *expert system* to help him find the right software for his needs.

Describe how an expert system would help him.

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(e) Before Simon can download the software he has to register with the site and give some personal information.

(i) Describe **two** methods that the website company could use to keep the personal information secure.

1. 

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2. 

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(ii) State the name of the law that requires personal information to be kept secure.

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(iii) State **two** other requirements of the law.

1. 

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2. 

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KU	PS
	2 1 0
	2 1 0
1 0	
2 1 0	

[Turn over

4. Charlotte works as a trainer for a software company. She visits companies that purchase the software and delivers presentations on its use.

(a) The presentation software she uses allows her to use *templates* to make up the slides.

What is a template?

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(b) Charlotte encourages the people she trains to make use of *online help* and *online tutorials*

What is the difference between online help and an online tutorial?

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(c) Charlotte also writes help sheets that she can e-mail to clients as *attachments*.

What is an e-mail attachment?

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(d) She saves the help sheet documents using *standard file formats*.

(i) Name **two** standard file formats for text documents.

1. \_\_\_\_\_
2. \_\_\_\_\_

(ii) Explain why Charlotte saves her help sheets using these file formats.

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KU	PS
2 1 0	
2 1 0	
1 0	
2 1 0	
	1 0



5. Julie is doing a project on the health of patients in a hospital. The information about the patients is stored in a database, part of which is shown below.

Patient ID	Age	Sex	Height (m)	Weight (kg)	Body Mass Index
04837	25	Male	1.76	75	24.2
95838	36	Female	1.35	53	29.1
54784	43	Male	1.68	83	31.2

- (a) The **Body Mass Index** field is a *computed field*.

State what is meant by the term “computed field”.

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- (b) Any person with a Body Mass Index of more than 25 is classed as being overweight.

Describe how to use the database software to get a list of all of the overweight males.

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- (c) Julie needs to make a back up of her database and is not sure whether to use a *hard disk* or *magnetic tape*.

What is the difference between a hard disk and magnetic tape in terms of accessing files stored on them?

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- (d) Julie puts the results of her research on a web site. To brighten up one of the web pages she uses the graphic shown here. Unfortunately she finds that the graphic is too big but is not sure whether to *crop* the graphic or *scale* it.



Should Julie crop or scale the graphic? Give a reason for your answer.

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KU	PS
1	2
0	1
	0
2	2
1	1
0	0

5. (e) Julie uses *hotspots* on some of the web pages.  
cont

(i) What is a hotspot?

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(ii) How can a user tell where a hotspot appears on a web page?

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(f) Describe **two** parts of the *CPU* in Julie's computer.

1. 

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2. 

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KU	PS
1 0	
1 0	
2 1 0	

[Turn over

6. A bakery uses a robot arm to ice cakes that are on a conveyor belt.

(a) The programs are stored on ROM chips compared with on backing storage devices.

(i) State **one** advantage of storing programs on ROM.

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(ii) State **one** disadvantage of storing programs on ROM.

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(b) The bakery wants to use the robot arm for other things, like placing the cakes into boxes.

State **two** things the bakery will have to change to enable the robot arm to be used for this purpose.

1. 

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2. 

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(c) Describe **two** ways in which the work of the employees of the bakery has changed with the automation of certain jobs.

1. 

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2. 

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(d) The ovens in the bakery have *embedded systems* built into them.

What is an embedded system?

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[END OF QUESTION PAPER]

KU	PS
1 0	
1 0	
	2 1 0
	2 1 0
2 1 0	

6. Faithless Fashion is a chain of clothes shops. They encourage customers to get the shops own storecard which customers can then use buy items on credit.

(a) The storecard is a *smartcard*.

What is a smartcard?

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(b) To get a storecard the user has to fill out an application form. The form is then input into a computer system using *OCR*.

(i) What do the initials OCR stand for?

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(ii) Describe **one** difficulty in using this method to input the personal data about a customer from a form.

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(iii) Describe a method of verifying data input in this way.

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(c) When a customer uses their smartcard they have to enter their PIN number. The PIN number is *validated*.

State **one** method of validating of a PIN number and describe how it works.

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(d) Many customers are worried about the increase of computer crime when “hackers” access their personal details and use them to access money from their bank accounts.

(i) State the law that outlaws this.

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(ii) What else does this law outlaw?

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KU	PS
1 0	
1 0	
	1 0
	1 0
	2 1 0
1 0	
1 0	

[END OF QUESTION PAPER]